

**Notice of Allowability**

Application No.

10/657,695

Examiner

Dismery E. Mercedes

Applicant(s)

KAWASHIMA ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after final amend. filed 10/02/2006.
2. ☒ The allowed claim(s) is/are 2-9, 11-21, 23-42 (renum 1-39).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claim 2-5,6-9,11-21, 23-42 (renumbered 1-39) are allowed.
2. The following is an examiner's statement of reasons for allowance:

Independent Claim 2 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether a transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when an outcome of said judgment indicates said transfer direction of said tape-shaped recording medium is said forward direction, said control unit controls said signal-processing unit so that a recording current supplied to said recording head is set at a value greater than a value of a recording current supplied to said recording head while said magnetic tape is traveling in said reverse direction.*

Independent Claim 6 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether a transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said reverse direction, said control unit controls said signal-processing unit so that a recording current supplied to said recording head is set at a value smaller than a value of a recording current supplied to said recording head while said magnetic tape is traveling in said forward direction.*

Independent Claim 11 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operation of said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium*

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*transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein said control unit switches signal processing carried out on a phase characteristic in said signal processing unit from a first kind of processing to a second kind of processing in dependence of an outcome of said judgment.*

Independent Claim 23 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a small thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said forward direction, said control unit controls said signal-processing unit so that said signal to be recorded is subjected to an encoding process adopting a method known as partial response class 4.*

Independent Claim 27 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a large thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said forward direction, said control unit controls said signal-processing unit so that a line recording density is increased to a value greater than a value of a line recording density for said reverse direction.*

Independent Claim 29 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-*

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*processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a large thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said reverse direction, said control unit controls said signal-processing unit so that a line recording density is decreased to a value smaller than a value of a line recording density for said forward direction.*

Independent Claim 31 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations or said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a small thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said forward direction, said control unit controls said signal-processing unit so that said reproduced signal output by said reproducing head is subjected to signal processing carried out on a frequency characteristic by adoption of a method known as partial response class 4.*

Independent Claim 37 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a large thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said forward direction, said control unit controls said signal-processing unit so*

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*that said reproduced signal output by said reproducing head is subjected to signal processing carried out on a frequency characteristic.*

Independent Claim 40 is allowable over the prior art of record since the cited references taken alone or in combination do not teach or suggest: *a control unit for controlling operations of said signal-processing unit, for forming a judgment as to whether said transfer direction of said tape-shaped recording medium transferred by said transfer means is said forward direction or said reverse direction, and for controlling said signal-processing unit in accordance with a result of said judgment, wherein when a magnetic head causing a large thermal asperity noise is employed as said recording head and an outcome of said judgment indicates that said transfer direction of said tape-shaped recording medium is said reverse direction, said control unit controls said signal-processing unit so that said reproduced signal output by said reproducing head is subjected to signal processing carried out on a frequency characteristic.*

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Yamada et al. (US 5,912,780); Nishima et al. (US 6,236,800); Shi et al. (US 5,550,684); Nishima et al. (US 6,236,800); Gooch (US 5,189,572); Kashida et al. (US 4,766,507); Aoki et al. (US 6,122,129); Fukuoka et al. (US 5,844,737); Yoshida et al. (US 5,963,388); Molstad et al. (US 7,046,466); Takada et al. (US 5,481,514); Hathaway et al. (US 4,916,555); Honjo et al. (US 6,424,483).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E. Mercedes whose telephone number is 571-272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DM



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